



June 25, 1999

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Ms. Medula Logan, Risk Assessor
Alameda County Environmental Health Services
Environmental Protection 131 Harbor Way parkway, Suite 250
Alameda CA 94502-677

99 JUN 28 PM 3:37
ENVIRONMENTAL
PROTECTION

SUBJECT: Addendum To Risk Based Corrective Action Assessment For Soil
REGARDING: Beck Roofing Company, 21123 Meekland Avenue, Hayward, CA

Dear Ms. Logan:

This addendum was developed per your verbal request. You requested additional analyses and data to complete your review of potential health risks presented by residual benzene and MTBE contamination at the Beck Roofing site. The request included:

- Compare the arithmetic average soil and groundwater data values for MTBE and benzene to the Tier 1 RBSL.
- Evaluate the data at the 1×10^{-5} excess risk level rather than 10^{-4} or 10^{-6}
- Provide data for boring SB20, the boring closest to the buildings

Addendum tables 1-3 provide the average values and comparisons. MTBE data were not developed for the soil samples since samples were collected before MTBE was a constituent of regulatory concern.

The groundwater data meet the Tier 1 risk based screening levels (RBSL). The soil data do not meet the RBSL for the 25 and 30-foot deep samples. The average values meet the Tier I RBSLs if they are recalculated eliminating one data location, Boring SB21. (See Table 3). The extent of contamination was estimated using SB21 for the source data since this point appears to cause the average data values to exceed the RBSL.

Ms. Logan stated that Alameda County does not permit inclusion of biodegradation factors in degradation calculations. The calculations were redone using field data for points adjacent to SB21, the contamination source location, in the down and cross gradient directions. Soil data for SB21 and MW3 were used to determine the down gradient extent of contamination. Soil data for



SB21 and MW 1 were used to calculate the cross gradient extent of contamination. A simple linear graphical solution was used to determine the distance from the source of contamination, SB21, to a zero concentration level. The resulting graphs show the down gradient extent of contamination at 51.5 feet from SB 21, and a lateral extent of contamination at 49 feet from SB21. The office building is 60 feet away from SB21 in the cross gradient direction and about 50 feet in a direction diagonally between down and cross gradient.

The plume of benzene does not reach or extend under the office or warehouse building, based on the graphical solutions using 1991 and 1994 soil data for 25 and 30 feet bgs. Therefore, the soil to indoor air pathway is expected to be incomplete and not present a significant health risk at Beck Roofing.

Ms. Logan requested SB20 data, since this boring is closest to the buildings. The available data, 25 to 35 feet bgs, show nondetectable levels of benzene.

During subsequent telephone conversations Ms. Logan suggested that the wells which have shown nondetectable levels of benzene and MTBE (MW-1, -2 and -4) could be closed. She stated that MW3 should be monitored for two additional quarters then could be closed if the data meet Tier 1 RBSL values.

HE2 will monitor and sample MW3 during July, with permission of Beck Roofing. Alameda County, the Regional Water Quality Control Board (RWQCB) and the Department of Water Resources will be notified or provided with the required forms and reports for the well closures. The wells will not be closed until Beck Roofing receives written approval to proceed from Alameda County and/or the RQWCB.

Please contact me if you have any additional questions or concerns regarding this site. We look forward to your letter.

Sincerely,
Heilshorn Environmental Engineering



Elyse D. Heilshorn, P.E.
Consulting Engineer

cc: Mr. Amir Gholami, Alameda County



ADDENDUM TABLES COMPARISON OF AVERAGED DATA VALUES TO RBSL

Table 1 GROUNDWATER DATA 11/96-1/99

Well	Avg MTBE µg/L	Avg MTBE Conc. meets Tier 1 RBSL?	Average Benzene, µg/L	Avg Benzene Conc. meets Tier 1 RBSL?
Tier 1 MTBE RBSL 10-5, µg/L		27,000		
Tier 1 Benzene RBSL 10-5, µg/L				739
MW-1	ND	Yes	1.05	Yes
MW-2	ND	Yes	3.025	Yes
MW-3	ND	Yes	111.125	Yes
MW-4	ND	Yes	0.65	Yes

Notes:

MTBE RBSL provided by Medula Logan. Value calculated for another Alameda County site.
Benzene RBSL value for commercial setting, groundwater to indoor air pathway.

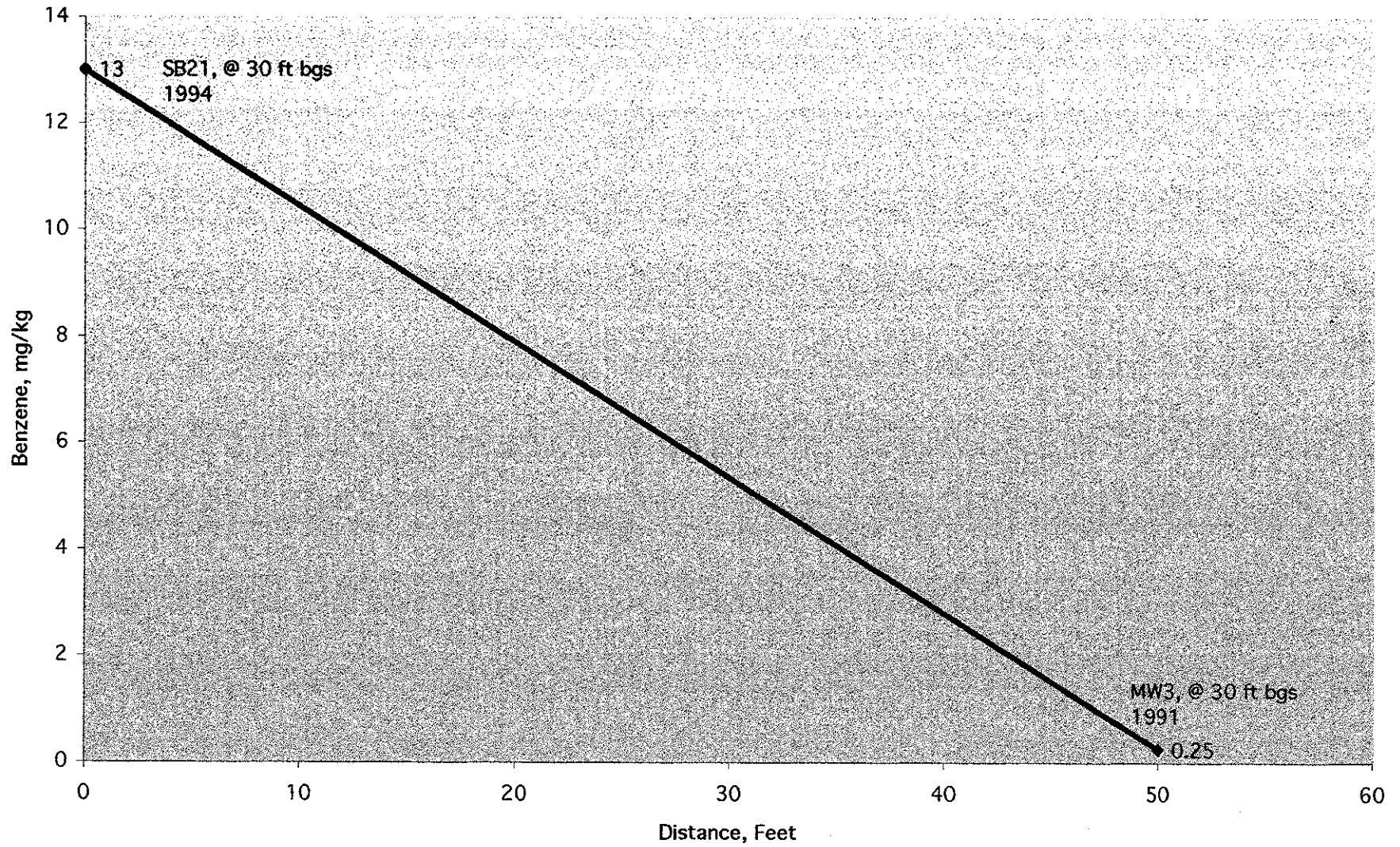
Table 2 SOIL DATA INCLUDING SB-21 (TANK PIT) DATA

Sample Depth Ft,bgs	Average Benzene Conc. mg/kg	Soil to Outdoor Air Pathway	Avg Conc. meets Outdoor Air RBSL?	Soil to Indoor Air Pathway	Avg Conc. meets Indoor Air RBSL?
Tier 1 RBSL 10-5 Commercial Benzene, mg/kg		4.57		0.169	
20	0.063		Yes		Yes
25	0.33		Yes		No
30	1.51		Yes		No

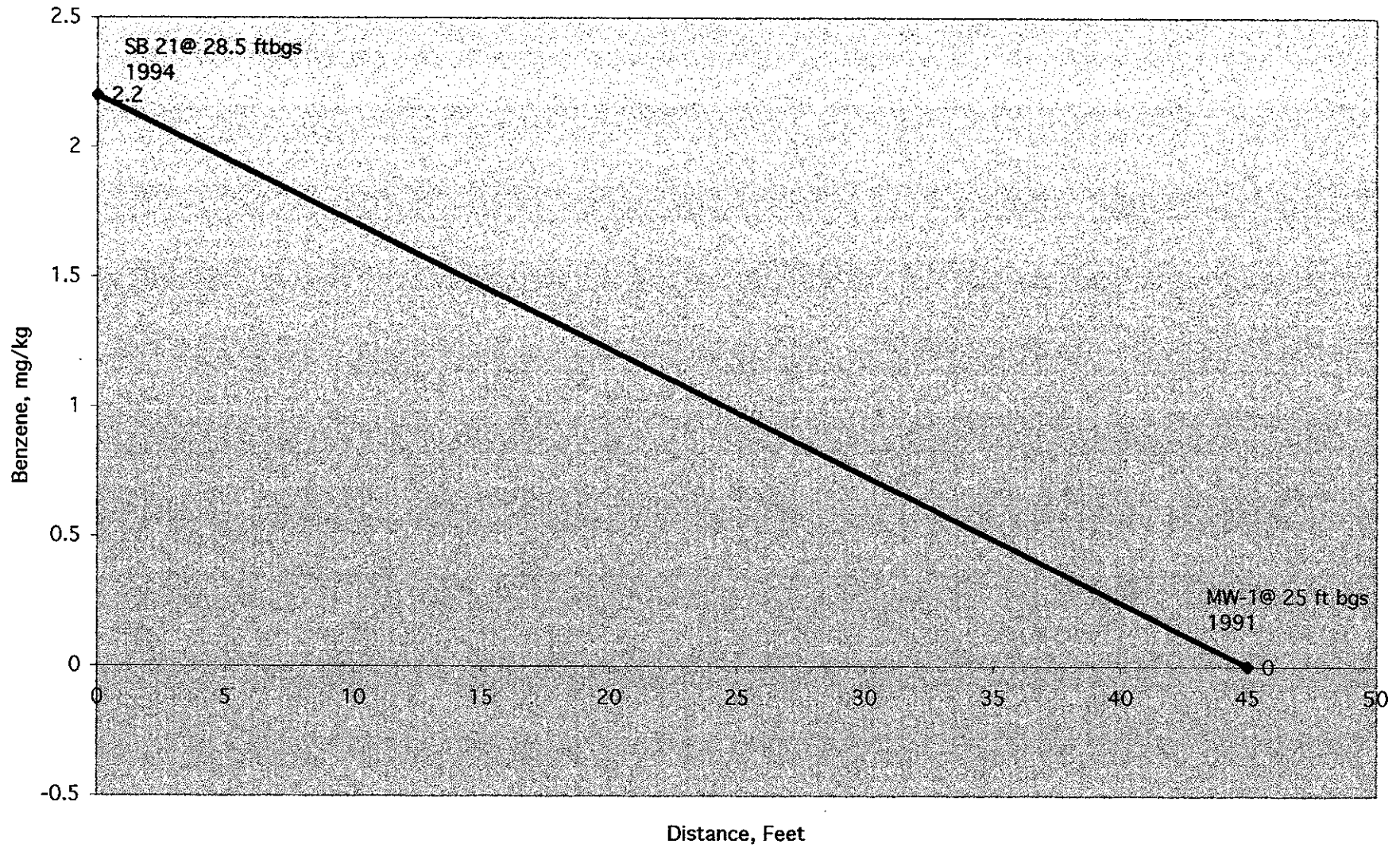
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Benzene Downgradient Extent in Soil



Benzene Cross Gradient Extent in Soil





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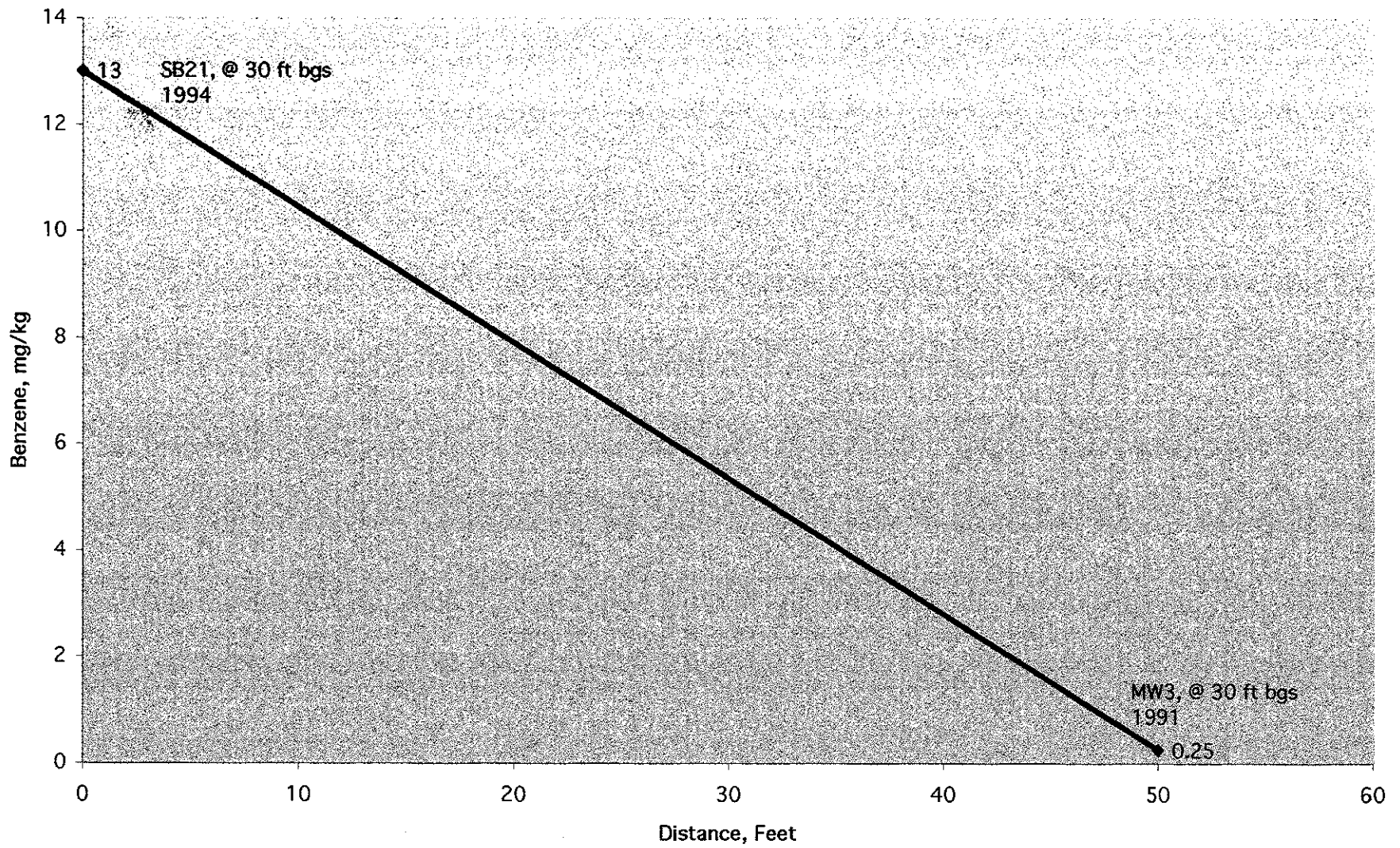
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